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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,979	11/29/2000	Johji Mamiya	JP9-1999-0267US1(8728-457	8978

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EXAMINER	
SINGH, DALIP K	
ART UNIT	**PAPER NUMBER**
2671	

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/725,979	MAMIYA ET AL.	
	Examiner	Art Unit	
	Dalip K. Singh	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,21 and 29-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,21 and 29-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to applicant's amendment dated October 14, 2005 in response to PTO Office Action dated August 10, 2005. The amendments to claim(s) 21 has been noted and entered in the record, and applicant's remarks have been carefully considered resulting in the action as set forth herein below.

2. The finality of Office action dated August 10, 2005 is being withdrawn.

3. With regards to applicant's argument with respect to claim 1 that Nicholson-Ludtke combination fails to disclose "packetized image data comprising a header identifying the panel control processor" or with respect to claim 29 "image data comprising a header identifying a first panel control processor from among the plurality of panel control processors, applicant's attention is drawn to Nicholson reference at col. 15, lines 45-67 wherein "...a packet of information containing the address and the appropriate display information for each display module 12 is broadcast..." which is similar to packetized data as per claim 1 limitations **but fails to disclose** having a specific header that identifies the panel control processor and a body including the image data. Nicholson reference at col. 15, lines 58-62 **discloses** Receive bit map block 326, in each module 12, receiving the bit map corresponding to the address of the particular display module 12 which is not quite the same limitation as a header, although it serves to target a specific display module; and further acknowledgement of receipt of such a bit map; the microprocessor 62 examines the bit map with transfer of bit map information occurring which is similar to a header being received and a control processor responding to such information. However, the specific claim limitation of a specific header and a body is not explicitly disclosed in Nicholson reference (see col. 15, lines 65-67; col. 16, lines 1-15). Nicholson as modified by Ludtke **discloses** a format of data packet for transmitting data from the host to the display device (...data packet includes a packet header and a data field or payload...packet

header includes a data_length field...the remaining data portion contains the actual video data payload...within...the packet...col. 17, lines 59-67; col. 18, lines 1-47). Ludtke et al. **further discloses** the master device 22 sending a configuration command to inform the display device which image section it is responsible for (...a configure command is utilized by a control device to...set up a multiple display configuration...device_ID_list //specifies a list of 1394 GUIDs, one for each display device to use...col. 19, lines 30-67; col. 20, lines 1-50). Fig. 4 of Ludtke et al. **discloses** display devices 24-40 configuration with a CPU 106 similar to the control processor recited in the instant claims.

4. With respect to page 8 of response dated October 14, 2005, applicant **expresses the inability to identify the quoted language at page 4, lines 17-20**, applicant's attention is drawn to Fig. 3 and Fig. 4 of Ludtke reference wherein master device 22 physical interface circuit 92 of Fig. 3 is communicating with display device 24's physical interface circuit 102; data being sent in a stream of data packets, each including an address value corresponding to a memory location within the appropriate display device (col. 4, lines 15-35).

5. With regards to applicant's argument with respect to claims 3 and 32, Knox's invention recognizes that bandwidth of a data link between the video controller and monitor becomes excessive for large screen displays (col. 3, lines 24-30). Having established this bottleneck, Knox **discloses** compressing video data (using lossless or lossy techniques) and decompressing video data on the display side resulting in higher resolution images (col. 5,lines 10-67). Applicant's attention is also drawn to the instant application's specification which similarly discloses host transferring compressed image data and the display side expanding the compressed image data (specification page 8, lines 12-18).

6. Applicant's arguments with respect to claim 21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim(s) 1, 2 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,150,996 to Nicholson et al. in view of U.S. Patent No. 6,501,441 B1 to Ludtke et al.

a. Regarding claims 1 and 29, Nicholson et al. **discloses** a host (sign controller 18, Fig. 11) for executing an application, the host comprising a pre-processor (processor 240, Fig. 11); and a display (display module 12, Fig. 13) connected to the host (sign controller 18), the display (display module 12) displaying an image, wherein said host (sign controller 18) transfers image data to the display (display module 227...controller 18 communicates to each display module 12...to address each display module 12 and display information on sign 10...col. 7, lines 39-67), said display (display module 12) includes a panel control processor (microprocessor 62, Fig. 13) for processing the image data, and a panel memory (memory 64) for storing processed image data (...memory 64 for storing bit map information of several images to be displayed on the display module 12...col. 12, lines 1-26), wherein the processed image data in the panel memory (memory 64) is displayed as the image. Nicholson et al. **discloses** addressing each display modules 12 (...sign controller 18 performs a sequence of operations illustrated as a block diagram...to address each...display module...resets the address of each display module...after addressing each display 12, sign controller 18 prepares to display information...col. 14, lines 7-67; col. 15, lines 1-45), the map block 320 creates a map of the addresses, map bit block 322 creates a display bit map for each address display module 12 and broadcast bit

assignment block 324 sends a control signal having a packet of information (...a packet of information containing the address and the appropriate display information for each display module 12...col. 15, lines 45-67). However, Nicholson et al. **is silent about** the packet of information having a specific header that identifies the panel control processor and a body including the image data. Ludtke et al. **discloses** a format of data packet for transmitting data from the host to the display device (...data packet includes a packet header and a data field or payload...packet header includes a data_length field...the remaining data portion contains the actual video data payload...within...the packet...col. 17, lines 59-67; col. 18, lines 1-47). Ludtke et al. **further discloses** the master device 22 sending a configuration command to inform the display device which image section it is responsible for (...a configure command is utilized by a control device to...set up a multiple display configuration...device_ID_list //specifies a list of 1394 GUIDs, one for each display device to use...col. 19, lines 30-67; col. 20, lines 1-50). Fig. 4 of Ludtke et al. **discloses** display devices 24-40 configuration with a CPU 106 similar to the control processor recited in the instant claim limitations. Fig. 3 and Fig. 4 of Ludtke reference **discloses** wherein master device 22 physical interface circuit 92 of Fig. 3 is communicating with display device 24's physical interface circuit 102; data being sent in a stream of data packets, each including an address value corresponding to a memory location within the appropriate display device (col. 4, lines 15-35). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the device as taught by Nicholson et al. with the feature "packetized data structure detailing a header identifying the panel specific processor and a body that includes the image data" as taught by Ludtke et al. **because** packetized image data provides for robust data transmission in digital format resulting in reduced data transmission errors and the capabilities for data error corrections.

b. Regarding claim 2, Nicholson et al. **discloses** wherein said display refreshes the image using image data stored in said panel memory (memory 64)(...transfer bit block 330 transfers the bit map information from memory 64 to message output portion 72 and to input message input 88 of the light driver 87...col. 16, lines 1-15).

9. Claim(s) 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,150,996 to Nicholson et al. in view of U.S. Patent No. 6,501,441 B1 to Ludtke et al. as applied to claim 29 above, and further in view of U.S. Patent No. 5,636,631 to Waitz et al.

a. Regarding claim 30, Nicholson-Ludtke combination **is silent** about receiving image data showing image data showing different display characteristics and data quantities. Waitz et al. **discloses** *processing of two types of display data, monochrome and color; and pixels in the image are tagged as comprising either monochrome information or color information and a block of image data being readily separated into those pixels which are to be reproduced in color and those points which are to be reproduced in monochrome and further such tagging also enables the separate encoding of the respective data values, such as three values (red, green, and blue) for color pixels and highly precise luminance values for reproduction as monochrome values (see col. 1, lines 66-67; col. 2, lines 1-10). Also, Waitz et al.* ***discloses*** *different data quantities (...Tag records may contain varying amounts of data concerning an image...col. 3, lines 10-15; col. 3, lines 52-55*). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Nicholson-Ludtke combination with the feature "reception of image data showing different display characteristics and data quantities" as taught by Waitz et al. **because** it provides for efficient management of image data.

b. Regarding claim 31, Nicholson et al. **discloses** said first panel control processor (microprocessor 62, Fig. 13) for processing the image data, and a panel memory

(memory 64) for storing processed image data (...memory 64 for storing bit map information of several images to be displayed on the display module 12...col. 12, lines 1-26;...system comprises...a plurality of...modules...the modules are in communication with the sign controller to receive data...in conjunction with a plurality of other sign modules...col. 2, lines 55-67; col. 3, lines 1-1-40).

10. Claim(s) 3, 4 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,150,996 to Nicholson et al. in view of U.S. Patent No. 6,501,441 B1 to Ludtke et al. as applied to claim 1 above, and further in view of U.S. Patent No. 6,323,854 B1 to Knox et al.

a. Regarding claims 3 and 4, Nicholson-Ludtke combination **is silent about** said host transfers image data showing a first resolution to said display and said display scales said transferred image data from having the first resolution to that having a second resolution. Knox et al. **discloses** as a means to reduce the bandwidth of data bus between host and said display, video data being sent as compressed data to the display where an interface then in turn decompresses the data for displaying purposes (...finally increasing resolution or color depth could be to some extent localized to the monitor rather than burdening the video controller...col. 3, lines 30-65...to reduce the bandwidth of data on the bus 210, preferably something less than the full uncompressed video data is transmitted from the video controller 200 the monitors 212...this compressed data is passed through a bus interface 305 over the bus 210 to the interface 214 within the monitor 212...the data is received in the interface 214 by a bus interface 306, where it is decompressed...col. 5, lines 10-67; col. 6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Nicholson-Ludtke combination with the feature "compressed data being uncompressed on the display side resulting in higher resolution images" as taught by Knox et al.

because it reduces bandwidth requirement between the video controller/monitor interface and improves efficiency.

b. Regarding claim 32, it is similar in scope to claim 3 above and is rejected under the same rationale.

11. Claim(s) 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,150,996 to Nicholson et al. in view of U.S. Patent No. 5,636,631 to Waitz et al.

a. Regarding claim 21, Nicholson et al. while disclosing a panel for displaying an image (...display module 227...controller 18 communicates to each display module 12...to address each display module 12 and display information on sign 10...col. 7, lines 39-67) **is silent about** two types of display data and discriminating between two types of data based on identification bits written to memory. *Waitz et al.* ***discloses*** *a format of image data storage wherein blocks of image data comprising monochrome or color data can be tagged as to the data type, enabling luminance data or red, green and blue data to be alternatively represented in the data values and automatically processed accordingly (See Abstract). a panel for displaying an image.* Claim 21 recites color image data and monochrome image data. *Waitz et al.* ***discloses*** *pixels in the image are tagged as comprising either monochrome information or color information and a block of image data being readily separated into those pixels which are to be reproduced in color and those points which are to be reproduced in monochrome and further such tagging also enables the separate encoding of the respective data values, such as three values (red, green, and blue) for color pixels and highly precise luminance values for reproduction as monochrome values (see col. 1, lines 66-67; col. 2, lines 1-10). Waitz et al. designates one bit of an image pixel data word as a "tag" bit, which identifies the data word as that of either a luminance or chrominance pixel. If the tag bit identifies the data word as that of a chrominance pixel, the subsequent bits are arranged to*

provide color information. If the tag bit identifies the data word as that of a luminance (monochrome) pixel, the subsequent bits are arranged to provide luminance information. Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the device as taught by Nicholson et al. with the feature "differentiating image data using identification bits as the data is written to the memory and making use of these identification bits for different data format processing" as taught by Waitz et al. **because** it provides for efficient management of image data, and for the rapid and effective display of the image data.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(571) 272-7792**. The examiner can normally be reached on Mon-Friday (10:30AM-6: 30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ulka Chauhan**, can be reached at **(571) 272-7782**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Please note that the new Central Official FAX number for application specific communications with the USPTO is **571-273-8300** (effective July 15, 2005).

Dalip K. Singh
Examiner, Art Unit 2671

dks
January 10, 2006

ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER